

REMARKS

Applicants acknowledge receipt of the Final Office Action dated September 8, 2003 in which the Examiner rejected claims 1, 3, 4, 8-10, 13 and 17 under 35 U.S.C. § 102(b) as being anticipated by *Hatayama* (JP 09033447A) and allowed claims 11, 15, 16, and 18-23. Applicants acknowledge with appreciation the allowance of claims 11, 15, 16, and 18-23.

Status of the Claims

Claims 1, 8 and 10 have been amended.

Claims 2, 5-7, 12, and 14 are cancelled.

Claims 15-23 are in original form.

Claims 24-46 are newly added.

Inventor Names

The inventor names were incorrectly represented on the application cover sheet because in Chinese, the family name is listed first. Accordingly, Applicants submit herewith an Application Data Sheet to correctly represent the inventor names as follows:

TOO, Yew Teng

OKAZAKI, Shigeki

CHOO, Poo Dee

Thus, the inventive entity should be "TOO et al." instead of "TENG et al."

Claim Rejections Under 35 U.S.C. § 102(b) in View of *Hatayama* (JP 09033447A)

Claims 1, 3, 4, 8-10, 13 and 17 stand rejected under 35 U.S.C. § 102(b) as being anticipated by *Hatayama* (JP 09033447A). Attached hereto as EXHIBIT A is a "Pattera Instant MT Machine Translation" in English of the *Hatayama* '447A reference for the Examiner's review and consideration.

With respect to claim 1, Applicants submit that *Hatayama* '447A fails to teach or suggest a disc drive for spinning the optical disc at a plurality of speeds including a normal operating speed and a lower speed, wherein the disc drive is maintained at the lower speed during crack detecting, and at the normal operating speed if no crack is detected in accordance with amended claim 1. In particular, referring to paragraph [0015], *Hatayama* '447A teaches that rotation of the spindle 1 is adjustable from between 30 to 120 rpm, for example, but crack detection should be performed at "high speed rotation" because "excessive low speed rotation is connected to delay of inspection time," and therefore, "considering detection sensitivity and inspection time of the optimum photo detector 2b, it is necessary to decide the rotation rate of spindle 1." Paragraph [009] also mentions operating the spindle 1 at a "predetermined velocity." Further, the Abstract and paragraphs [004], [0019], [0021], and [0023] of *Hatayama* '447A all mention operating the disc drive at "high speed" during substrate crack detection so as to minimize the expense and time associated with this task. Therefore, *Hatayama* '447A makes it clear that crack testing should be performed at high speed, and that the disc drive should be rotated at a single, predetermined velocity within a range of available speeds. Accordingly, *Hatayama* '447A teaches away from operating the disc drive at a plurality of speeds, and more particularly, teaches away from operating the disc drive at a **lower** speed during crack detecting and at a normal operating speed if no crack is detected according to claim 1.

The teachings of *Hatayama* (JP 11023486A) are similar to those of *Hatayama* '447A. Attached hereto as EXHIBIT B is a "Pattera Instant MT Machine Translation" in English of the *Hatayama* '486A reference for the Examiner's review and consideration. Referring to paragraph [0013], *Hatayama* '486A teaches that rotation of the spindle 101 is adjustable from between 30 to 120 rpm, but a "suitable rotation rate" should be selected, and crack detection should be performed at "high speed rotation" because "low speed rotation" is not desirable since that would "greatly delay"

the inspection time. Paragraph [0028] also mentions operating the spindle 101 at a “rotation rate which considers optimum sensor detection sensitivity and inspection time.” Further, paragraphs [0032] and [0033] of *Hatayama* ‘486A mention detecting cracks in the disk at “high speed” so that “inspection cost can be decreased, inspection time can be shortened.” Therefore, *Hatayama* ‘486A also makes it clear that crack testing should be performed at high speed, and that the disc drive should be rotated at a single, predetermined velocity within a range of available speeds. Accordingly, *Hatayama* ‘486A teaches away from operating the disc drive at a plurality of speeds, and more particularly, teaches away from operating the disc drive at a **lower** speed during crack detecting and at a normal operating speed if no crack is detected according to claim 1.

Thus, the cited references fail to disclose each and every element of claim 1. Accordingly, Applicants submit that claim 1 is patentably distinguishable over the art of record. Additionally, Applicants note that pending claims 3 and 4, as well as new claims 24-27 depend from allowable claim 1. Thus, Applicants respectfully submit that claims 3, 4, and 24-27 are likewise allowable over the art of record.

Referring now to claim 8, Applicants submit that *Hatayama* '447A fails to teach or suggest a crack detection mechanism comprising a microcontroller for sending a command to the disc drive based on the received light signals, the command being selected from the group consisting of: operate at a normal speed, maintain a lower speed, slow the disc drive, and halt the disc drive. Instead, as argued above, both *Hatayama* '447A and *Hatayama* '486A disclose only rotating the disc drive at a single, predetermined velocity within a range of available speeds to perform crack detection. Therefore, these references fail to teach or suggest sending a command to change the speed or halt the disc drive based on the received light signals.

Thus, the cited references fail to disclose each and every element of claim 8. Accordingly, Applicants submit that claim 8 is patentably distinguishable over the art of record. Additionally,

Applicants note that pending claims 9 and 17, as well as new claims 28-31 depend from allowable claim 8. Thus, Applicants respectfully submit that claims 9, 17, and 28-31 are likewise allowable over the art of record.

Referring now to claim 10, Applicants submit that *Hatayama* '447A fails to teach or suggest a method for detecting cracks in optical discs comprising sending a command to the disc drive based on the received light signals, the command being selected from the group consisting of: operate at a normal speed, maintain a lower speed, slow the disc drive, and halt the disc drive. Instead, as argued above, both *Hatayama* '447A and *Hatayama* '486A disclose methods for detecting cracks comprising rotating the disc drive at a single, predetermined velocity within a range of available speeds. Therefore, these references fail to teach or suggest sending a command to change the speed or halt the disc drive based on the received light signals.

Thus, the cited references fail to disclose each and every element of claim 10. Accordingly, Applicants submit that claim 10 is patentably distinguishable over the art of record. Additionally, Applicants note that pending claims 13, as well as new claims 32-35 depend from allowable claim 10. Thus, Applicants respectfully submit that claims 13, and 32-35 are likewise allowable over the art of record.

New Claims


New dependent claims 24-46 have been added to further claim the invention. At least because each of these claims depend from an allowable base claim, Applicants submit that new claims 24-26 are patentably distinguishable over the art of record and are therefore in condition for allowance.

CONCLUSION

During the course of these remarks, Applicants have at times referred to particular limitations of the claims that are not shown in the applied prior art. This shorthand approach to discussing the claims should not be construed to mean that the other claimed limitations are not part of the claimed invention. They are as required by law. Consequently, when interpreting the claims, each of the claims should be construed as a whole, and patentability determined in light of this required claim construction. Unless Applicants have specifically stated that an amendment was made to distinguish the prior art, it was the intent of the amendment to further clarify and better define the claimed invention and the amendment was not for the purpose of patentability.

Reconsideration of the claims as amended and the allowance thereof is respectfully requested. If the Examiner has any questions or comments regarding this communication, he is invited to contact the undersigned to expedite the resolution of this application.

Respectfully submitted,



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